

WHAT IS CLAIMED IS:

1. A device for sealing a passage through tissue,
comprising:
 - a bioabsorbable body comprising a proximal end, a distal
5 end, the body comprising a lumen extending between the proximal
end and a distal inlet port; and
 - a sealing member disposed within the lumen that is
expandable across the lumen for substantially sealing the lumen
from fluid flow therethrough.
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2. The device of claim 1, wherein the sealing member
comprises a material that is expandable when exposed to fluid to
substantially seal the lumen.
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3. The device of claim 2, wherein the material comprises
an expandable gel foam.
4. The device of claim 1, wherein the sealing member
comprises an annular-shaped member.

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5. The device of claim 1, wherein the sealing member
comprises a bioabsorbable material.

6. The device of claim 1, wherein the sealing member is biased towards a first configuration for substantially sealing the lumen from fluid flow therethrough, and is movable to a second configuration for accommodating introduction of one or 5 more devices through the lumen.

7. The device of claim 1, further comprising a connector on the proximal end of the body for detachably securing the body to a delivery device.

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8. The device of claim 1, further comprising an elongate shaft extending from the proximal end of the body.

9. The device of claim 1, wherein the body has a length of 15 not more than about ten millimeters.

10. The device of claim 1, wherein the body has a diameter and a length, the diameter being not more than about twice the length.

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11. A device for sealing a passage through tissue, comprising:

a bioabsorbable body comprising a proximal end, a distal end, the body comprising a lumen extending between a proximal

port and a distal port, the lumen comprising a tapered portion that tapers in cross-section; and

a sealing member comprising a generally annular-shaped member disposed adjacent a wide end of the tapered portion of the 5 lumen, the sealing member being movable into the tapered portion for substantially sealing the lumen from fluid flow therethrough.

12. The device of claim 11, wherein the sealing member comprises a material that is expandable when exposed to fluid to 10 substantially seal the lumen.

13. The device of claim 11, wherein the sealing member comprises a coil of material.

15 14. The device of claim 11, wherein the sealing member comprises a flexible material that may be wedged into the tapered portion.

15. The device of claim 11, wherein the sealing member 20 comprises a bioabsorbable material.

16. The device of claim 11, further comprising a connector on the proximal end of the body for detachably securing the body to a delivery device.

17. The device of claim 11, further comprising an elongate shaft extending from the proximal end of the body.

5 18. The device of claim 11, wherein the body has a length of not more than about ten millimeters.

19. An apparatus for sealing a passage through tissue, comprising:

10 an elongate member having a proximal end, a distal end, and a lumen extending between the proximal and distal ends; and a plug member disposed on the distal end of the elongate member, the plug member comprising a distal port therein in communication with the lumen, the plug member having a cross-
15 section larger than a cross-section of the elongate member.

20. The apparatus of claim 19, wherein the plug member comprises a passage therein extending between the distal port and the lumen.

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21. The apparatus of claim 20, further comprising a sealing member disposed in the passage for substantially sealing the passage from fluid flow therethrough.

22. The apparatus of claim 21, wherein the sealing member comprises a material that is expandable when exposed to fluid for substantially sealing the passage.

5 23. The apparatus of claim 21, wherein the sealing member is biased towards a first configuration for substantially sealing the passage from fluid flow therethrough, and is movable to a second configuration for accommodating introduction of one or more devices through the passage.

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24. The apparatus of claim 21, wherein the sealing member comprises a valve.

15 25. The apparatus of claim 21, wherein the lumen includes a tapered portion reducing in cross-section, and wherein the sealing member comprises a generally annular-shaped member disposed adjacent a wide end of the tapered portion of the lumen, the annular-shaped being movable into the tapered portion for substantially sealing the lumen.

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26. The apparatus of claim 25, further comprising a activation element coupled to the elongate member, the activation element extending into the lumen of the plug member for moving

the sealing member into the tapered portion for substantially sealing the lumen.

27. The apparatus of claim 20, further comprising an
5 elongate member insertable through the lumen such that a distal end of the elongate member is disposed beyond the distal end of the plug member.

28. The apparatus of claim 27, wherein the distal end of
10 the elongate member comprises a location indicator for identifying when the distal end of the plug member is disposed adjacent a body lumen.

29. The apparatus of claim 28, wherein the elongate member
15 comprises a tubular member including a bleed back lumen, and wherein the location indicator comprises a bleed back port on the distal end of the tubular member, the bleed back port being in communication with the bleed back lumen.

20 30. The apparatus of claim 28, wherein the location identifier comprises an expandable member, the expandable member being expandable when the distal end is disposed within a body lumen for providing tactile feedback of a location of the distal end of the plug member with respect to the body lumen.

31. The apparatus of claim 27, wherein the elongate member comprises an obturator including a substantially atraumatic distal tip.

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32. The apparatus of claim 27, further comprising a valve in the passage for substantially sealing the passage yet accommodating insertion of the elongate member therethrough.

10 33. The apparatus of claim 19, wherein the plug member is releasable from the elongate member.

15 34. The apparatus of claim 33, wherein the elongate member comprises an actuator for releasing the plug member from the distal end of the elongate member.

20 35. The apparatus of claim 33, further comprising cooperating connectors on the distal end of the elongate member and on the plug member for releasably securing the plug member to the distal end of the elongate member.

36. The apparatus of claim 33, wherein the plug member comprises an interior cavity, and wherein the elongate member comprises an engagement element extending from the distal end

thereof for insertion into the cavity, the engagement element being expandable and collapsible for engaging and disengaging an interior wall of the plug member, thereby selectively securing the plug member to and releasing the plug member from the distal 5 end of the elongate member, respectively.

37. The apparatus of claim 33, wherein the plug member comprises bioabsorbable material.

10 38. A method for sealing a passage through tissue communicating with a body lumen using an apparatus comprising an elongate member, a plug member disposed on a distal end of the elongate member, and a bleed back indicator associated with a distal end of the plug member, the method comprising:

15 inserting the plug member into the passage;
advancing the elongate member, thereby advancing the plug member into the passage until the bleed back indicator enters the body lumen, whereupon fluid from the body lumen may enter the bleed back indicator to identify the location of the body lumen
20 with respect to the plug member; and
withdrawing the plug member a predetermined distance relative to the body lumen.

39. The method of claim 38, further comprising releasing the plug member from the elongate member within the passage.

40. The method of claim 39, wherein the plug member comprises a bioabsorbable material, and wherein the method further comprises leaving the plug member within the passage until it is absorbed by the tissue.

41. The method of claim 38, wherein the body lumen comprises a blood vessel, and wherein the elongate member is advanced until the plug member substantially seals at least one of the passage and a wall of the blood vessel.

42. The method of claim 41, further comprising:
leaving the plug member within the passage for sufficient time for hemostasis to occur; and
removing the plug member from the passage.

43. The method of claim 41, wherein the step of advancing the elongate member comprises advancing the plug member through one or more intermediate layers of tissue towards the vessel.

44. The method of claim 43, wherein the one or more intermediate layers of tissue comprises a layer of fascia.

45. The method of claim 38, wherein the elongate member includes a lumen extending from its proximal end through the plug member.

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46. The method of claim 45, wherein the bleed back indicator comprises a bleed back port in the plug member, the bleed back port being in communication with the lumen.

10 47. The method of claim 45, further comprising inserting an obturator through the lumen until a distal end of the obturator extends distally beyond the plug member.

15 48. The method of claim 47, wherein the bleed back indicator comprises a bleed back lumen in the obturator.

49. The method of claim 38, further comprising introducing one or more instruments through the passage to perform a procedure before inserting the plug member into the passage.

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50. A method for sealing a passage through tissue communicating with a body lumen using an apparatus comprising an elongate member, a plug member disposed on a distal end of the

elongate member, and a lumen extending proximally from a distal port in the plug member, the method comprising:

inserting the plug member into the passage until the helical thread begins to enter the passage;

5 advancing the elongate member, thereby advancing the plug member into the passage until the distal port enters the body lumen, whereupon fluid from the body lumen may enter the distal port to identify the location of the body lumen with respect to the plug member; and

10 activating a sealing member in the lumen, thereby substantially sealing the lumen from fluid flow therethrough.

51. The method of claim 50, further comprising withdrawing the plug member a predetermined distance relative to the body 15 lumen.

52. The method of claim 50, further comprising releasing the plug member within the passage.

20 53. The method of claim 50, wherein the sealing member comprises a material that is expandable upon exposure to fluid, and wherein the activating step comprises exposing the sealing member to fluid when the distal port enters the body lumen.

54. A method for sealing a passage through tissue communicating with a body lumen, the method comprising:
providing an elongate member extending through the passage into the body lumen;

5 advancing a plug member over the elongate member until an outer surface of the plug member begins to engage tissue surrounding the passage;

advancing the plug member into the passage until a distal port in the plug member enters the body lumen, whereupon fluid 10 from the body lumen may enter the distal port to identify that plug member has entered the body lumen; and

15 withdrawing the elongate member from the passage, leaving the plug member within the passage to substantially seal the passage.

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55. The method of claim 54, further comprising withdrawing the plug member a predetermined distance relative to the body lumen.

20 56. The method of claim 54, further comprising activating a sealing member within the lumen of the plug member, thereby substantially sealing the lumen from fluid flow therethrough.

57. The method of claim 54, wherein the plug member is disposed on a distal end of a handle device.

58. The method of claim 57, further comprising releasing 5 the plug member from the distal end of the handle apparatus within the passage.

59. The method of claim 54, wherein the elongate member comprises an introducer sheath, and wherein the method further 10 comprises inserting one or more devices through the introducer sheath into the body lumen.

60. The method of claim 54, wherein the step of advancing the elongate member comprises advancing the plug member through 15 one or more intermediate layers of tissue towards the body lumen.

61. The method of claim 60, wherein the one or more intermediate layers of tissue comprises a layer of fascia.